Bocconi Students Fintech Society

DAOs: an introduction to the organizations of the future.

Decentralized Autonomous Organizations

What are DAOs?

- A DAO is a group of people who have entered a **contract** with one another to reach a coordinated goal. It can be anything from collecting NFTs to predicting stock market moves;

- It usually exists to **raise money** for a specific purpose;

- There is an initial funding period, in which people add funds to the DAO by purchasing tokens that represent ownership – this is an initial coin offering (ICO) to give it the resources it needs;

- People then can make proposals to the DAO on how to spend the money, and the members vote to approve these proposals;

- DAOs are exclusively **online** and they operate through digital transactions on the **blockchain** technology;

- They are **flat hierarchies** with collective decisions: members have a shared goal without a leader who directs the group;

- DAOs take advantage of **DeFi,** which allows them to hold crypto wallets and engage in digital transactions.

Why do we need them?

Transparency: With DAOs you don't need to trust anyone else in the group, just the DAO's code, which is 100% transparent and verifiable by anyone.

Decentralized and Democratic: changes usually come about through a majority consensus of all the members. As they are decentralized, they also remove the need for financial intermediaries, with lower bureaucratic barriers.

Shared goals among the investors: DAOs bring like-minded individuals with a common goal together to fund and support organizations. This reduces the risk of moral hazard.

Sources: Fortune.com; Ethereum.org; CoinDesk.com

DAOs' History and The Big Hack

The first DAO: From Vision to Reality

1997 The first **reference** to the concept of DAO was by a German professor of Computer Science who published an article where he defined a DAO as a self-sustaining and autonomous system.

2016 The first real DAO was created by a German startup called Slock.it, which was known as the Genesis DAO. It was intended, resulting in being the first of its kind, to act as an **investor-operated venture capital firm**. The coding framework of The DAO was built on the Ethereum blockchain, into a smart contract.

The great 2016 DAO

The 2016 DAO was the largest crowdfunding in history, having raised over $150m from more than 11,000 enthusiastic members.

Even before the token sale had concluded, however, computer scientists were concerned that a bug in The DAO's wallet smart contracts would allow them to be drained.

Focus: The Big Hack

- While programmers attempted to fix the bug, an attacker exploited the vulnerability and began siphoning funds from The DAO.

- This did not only mean financial loss for investors, but it also bore dire repercussions for the Ethereum network as the DAO contained approximately 14% of all ether (ETH) in circulation at the time. The hack resulted in a loss of 3.6m Ether (worth around $60m).

- Ethereum founder Vitalik Buterin proposed a fork of the Ethereum network, that blacklisted the attacker and prevented him from moving the stolen funds.

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Sources: CoinDesk.com; Wired.com; Waceo.org

DAOs' Memberships

The members of a DAO have a common mission, but no leader to guide the group.

How do they work?

Decisions are made collectively by the community.
Although every member of a DAO has a say in how the organisation is run and what direction it takes, some have more say than others. DAOs operate with the understanding that all of their members follow a specific set of rules. These rules are stored in a **smart contract**, and can be as simple as that each member commits to buying a certain amount of digital assets.

Under **token-based memberships**, users only need to hold the DAO's governance token to vote on key decisions, such as which projects to fund or changes to the governance rules.

Share-based membership DAOs are more permissioned, but still quite open. Any prospective members can submit a proposal to join the DAO, usually offering tribute of some value in the form of tokens or work. Shares represent direct voting power and ownership.

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Source: Fortune.com; Coinbase.com; Ethereum.org

Different interests, different DAOs

There exist different types of DAOs

Protocol DAOs
They are the most common type of DAO, often found behind every major decentralized financial protocol (DeFi). DAOs like these are used as a title and governance system for credit platforms, production optimizers, and more.

Collector DAOs
They pool together money to purchase and co-own valuable assets.

Media DAOs
These are collaborative publications that give power to their authors. Members can decide what to publish and how to use their resources.

Grant DAOs
They fund new ventures or projects, usually in the DeFi field. These typically emerge as the philanthropic arm of larger projects.

Social DAOs
They can be thought of as the country clubs or "masterminds" of crypto. Potential members gain access to a particular social circle by paying a membership fee in the form of purchasing a certain number of tokens from DAO. These social DAOs can take the form of any social circle.

Investment DAOs
They resemble traditional mutual funds that use pooled capital. DAO token holders can vote on what the pool of funds is invested in.

Source: Defirate.com

Investment DAOs

Investment DAOs may be the future in the way people invest.

How do they work?
People can now get together from around the globe and spot opportunities. Investment DAOs can have different targets, according to the interests of the participants, such as:
- Dapps
- NFTs
- Other blockchain-based projects.

Eventually, Investment DAOs can also be used as a tool of investment for non-digital assets: the ConstitutionDAO, formed in November 2021 to purchase an original copy of the United States Constitution, raised $47 million in Ether cryptocurrency, but lost to a bid of $43.2 million in the Sotheby's auction.

BitDAO
One of the largest decentralized autonomous organizations; it uses BIT as governance token. BitDAO seeks projects to collaborate with via token swaps and co-development initiatives.

DuckDAO
Decentralized incubator that helps promising projects achieve their full potential by leveraging the investment power and buzz making potential of its community.

Sources: Forbes.com; Bitdao.io; Duckdao.io

Investment DAOs

Investment DAOs already are differentiating across the crypto space.

Metacartel
Investments into early-stages Decentralized Applications (Dapps)

Ready Player
Investment into gaming economies via asset acquisition, strategic partnerships, and development of guilds.

TheLAO
Investments into any blockchain-based project (from $25k-$250k in ether).

Red
It will support, purchase, archive, collect, invest in items, and digital garments in the emerging world of digital wearables and fashion.

Flamingo
NFT-focused DAO that aims to explore emerging investment opportunities for ownable, blockchain-based assets.

Noise
Noise DAO will support musicians, purchase NFTs, archive, collect, and invest in the digital music ecosystem.

Within the Crypto-space, someone is ready to take the next step in ensuring a more diverse future of crypto builders and beneficiaries around the world.

Komorebi Collective
DAO that will be making investments exclusively in "exceptional female and non-binary crypto founders".

Sources: TechCrunch.com; Metacartel.org; Readyplayerdao.xyz; TheLao.io; Reddao.xyz; Flamingodao.xyz; Noisedao.xyz

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Current Limits and Challenges

DAOs have the potential to be the game changers of tomorrow's society, but are they ready yet?

Participation rate

DAOs reduce transaction costs. Still, attention cost cannot be limited. Most DAOs are characterized by low participation rates. Some of the possible solutions are:
- Allow only for just a few members with huge assets at stake;
- Flip the question: If a proposal is put up, it will pass unless people vote against it.

Legal concerns

Who gets the responsibility for a DAO? The legal framework is rapidly evolving toward an answer.
As of today, Wyoming and Vermont have passed legislation to allow DAOs to register as LLCs (in Wyoming) or blockchain-based LLCs (BBLLCs) (in Vermont) under their own name with legal personality.

System Integrity

Vulnerabilities in the code base can be sources of failings for DAOs, with consequent losses for the participants. TheDAO's hack taught the crypto community that there is a need for more resilient smart contracts to build the Web3.0. No trustless system can exist if there is the need to trust the developers of smart contracts.

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Authors

Project Lead

Luca Piunti
Project Leader

First year BSc student in International Economics and Management. Interested in technology-driven financial services.

Junior Analysts

Carlotta Rosselli

Andrea Tundo

Instagram.com/bocconistudentsfintechsociety

LinkedIn.com/company/bsfintechsociety

Bsfintechsociety.com

As.bsfintechsociety@unibocconi.it

www.bsfintechsociety.com